

## REMARKS

In response to the Official Action of April 8, 2004, please cancel Claims 85-99 and add Claims 100-118 as set forth supra.

Although Claims 85-99 have been cancelled, their subject matter has been replaced, in effect, by Claims 104-118.

The invention is directed to a system for demarcating an area which confines the free movement of animals. This is accomplished by a wire section 12 which may be electrified and which is connected between two vehicles in a system or to at least one of such vehicles at a reference point. The invention thus comprises a vehicle which is used for positioning and supporting an end of a wire section. The vehicle has two wheels on either side with the center of gravity of the vehicle being lower than the axis of rotation of the wheels. The wire which comprises the section is wound on a drum. The apparatus may be provided with a geodetic positioning system (GPS). It includes means for determining the substantially horizontal angle between a predetermined direction and a direction that the wire section extends as well as means for measuring the length of the wire section. For each vehicle 1, a computer may be provided which is programmed so that the vehicles move to predetermined positions at predetermined points of time according to a predetermined pattern.

In the Official Action, Claims 85-89, 94 and 96 (see new Claims 104-108, 113 and 115) were rejected on the basis of U.S. Patent No. 3,650,492, to Stum, in view of U.S. Patent No. 5,913,801, to Bottinger et al, under 35 U.S.C. §103. It is stated that Stum discloses an apparatus for demarcating an area which comprises a demarcation element that includes a section (wire) and a vehicle (tractor) connected to an end of the section. Concerning Stum, it is also stated that it discloses a vehicle including a geodetic positioning system for selectively positioning the end of the section of the demarcation element and angle measuring means which are associated with

the demarcation element for determining the angle between a predetermined direction and the section. It is respectfully submitted, however, that this description of the Stum and Bottinger et al references is incorrect. Neither reference discloses angle measuring means associated with a demarcation element for determining the angle between a predetermined direction and the section.

The patent to Bottinger et al is directed to an agricultural baler and method of baling. More specifically, it is directed to a system of determining partial-area-specific yield of an agricultural product. Such systems are well known and usually include a GPS coupled with some means for determining the agricultural yield in specific areas of a field for an agricultural product. The data so obtained is used to govern the seeding, fertilizing, irrigation, etc. required in specific areas to maximize agricultural production. The data obtained can also be utilized by agricultural machines which may also include GPS. The method involved may often substantially increase agricultural yield in a field. Attention is, in particular, invited to lines 39-42, 45-58 and 62-65 of column 1 of the Bottinger et al reference. Also attention is invited to line 67 of column 1 through line 9 of column 2 of the same reference. In column 2, further attention is invited to lines 46-50. It will also be noted that in Claim 24 of the Bottinger et al patent, lines 7 and 8, a device for detecting an actual geographic position of the baler is claimed. Although the balers and other equipment of the same type in Bottinger et al may include bales which are bound with wire or twine, these are certainly not, even in the broadest sense, field demarcation elements and even if they were, no means are provided for determining the angle between a predetermined direction and such wire or twine.

The Stum reference is for a reel for fence wire, etc. More specifically, as stated in the Abstract, it discloses a winding reel support and drive apparatus disposed on a trailer-type frame for the placement and retrieval of fence wire and the like. It is directed to situations wherein

fencing is erected for relatively short use periods when stock is to be grazed in selected fields. But the device functions simply to place fence wire which may be either of the barbed or simple conductor type at a place where it may be installed or to retrieve lengths of wire that have been taken off of their "supporting post." Thus the reel mechanism may move through fields and along roadways by various types of powered or tractor equipment to places where wire will be installed on supporting posts or the like and then used to reel in wires that have been removed from their supporting post. See column 1, lines 48-51 and the paragraph in column 2 commencing on line 13 and ending on line 21. Also attention is invited to line 75 in column 2 through line 4 of column 3 to the effect that the drum is often used as a free wheeling element when wire stored on reel 25 is to be redistributed. At such times, reel mechanism 11 may be towed along the field and the wire will then be paid out. However, to prevent overrunning of the reel, a brake can be applied to slow or stop the drum. But the fact is that neither Stum nor Bottinger et al discloses or teaches GPS for selectively positioning the end of a section of a demarcation element or angle measuring means associated with the demarcation element for determining the angle between a predetermined direction and the section.

In addition, concerning Claim 87 (see new Claim 106) wherein the demarcation element includes tightening means for tightening the demarcation element, this is not shown in the applied references.

Inasmuch as neither reference, Stum or Bottinger et al, discloses a GPS for selectively positioning the end of a section of a demarcation element or angle measuring means associated with the demarcation element for determining the angle between a predetermined direction and the section, the remaining comments in paragraph 2 of the Official Action relating to the possible modification of such references are superfluous.

In paragraph 3, on page 4 of the Official Action, Claims 85-103 (see new Claims 104-118 for prior Claims 85-97) were rejected on the basis of the German Offenlegungsschrift DE 4215714 A1, of Schulte, in view of U.S. Patent No. 6,338,013, to Ruffner, under 35 U.S.C. §103.

Concerning Claim 85 (see Claim 104), Schulte discloses an apparatus for demarcating an area which has a demarcation element having a section 6 and a vehicle 4 connected to the end of the section. The vehicle has a time switch system 38 which selectively positions the end of section 6 at pre-programmed locations at pre-programmed times and intervals for selectively positioning the end of the section of the demarcation element. It is further stated that there are angle measuring means 40 and 41 associated with the demarcation element for determining the angle between a predetermined direction (vertically upright) and the section.

Ruffner, it is stated, teaches an apparatus for mowing an area which has a mowing element 45 and a vehicle 1 connected to the mowing element. It is also stated that the vehicle has a geodetic positioning system for selectively positioning the mowing element and a GPS system for providing precise determination of the vehicle's location and precise scheduling of tasks. It is yet further stated that the GPS system provides for the correction of errors in a location due to error in the vehicle's starting location, changes in motor efficiency, unexpected obstacles, or wheel slippage.

In the Ruffner reference it is stated in the Abstract that the invention is a multi-functional, mobile appliance capable of performing a variety of tasks, safely, quietly, without pollution, and out of sight of the owner wherein such tasks might include lawn mowing, fertilizing and edging, floor vacuuming, waxing, and polishing or rug shampooing. Other tasks which may be performed by the Ruffner appliance are set forth in the Specification to include cultivating, weeding, raking, mulching, sanding, polishing, painting or pressure washing (column 5, lines 1-4). Also mentioned is the ability to pick up materials or dispose of waste products which might

include among other things water, seed, insecticide, protected coatings, detergent, abrasive particles for floor care, dust, clippings, absorbents and the addition of materials to and the removal of waste from the mobile unit (column 9, lines 1-12). Also cultivating gardens or crops is mentioned (column 10, lines 25 and 26). It is further stated that the apparatus can include not only a cutter assembly, but also a beater bar, a drum sander, a polishing cylinder, a trough for fertilizer distribution, a line of water jets, or a roller for the uniform application of sealant or coating (column 14, lines 32-37). Also included is a feature which allows the mobile unit of Ruffner to perform his particular task very close to edges of the walls (column 19, lines 54 and 55). Although the Ruffner reference is quite detailed and the use of unmanned vehicles to define feeding areas for grazing animals was known as indicated by the prior art of record, in particular the Offenlegungsschrift of Schulte, nothing has been cited or pointing out in Ruffner to suggest an unmanned vehicle which utilizes an apparatus for demarcating an area wherein the demarcation element includes at least one section with a vehicle connected to one end of such section and with the vehicle including a geodetic positioning system for selectively positioning the end of the section to the demarcation element. In other words, this use of his unmanned vehicle did not occur to Ruffner, although many other uses did and, if anything, Ruffner thus leads away not towards the combination of a geodetic positioning system with a demarcation element that includes at least one section.

Also Ruffner leads away from the use of GPS, thus stating that the most accurate GPS receiver (less accurate than GPS at the present time) still had an inherent error of considerably more than one meter and that this was not sufficiently accurate for most home, yard, or industrial appliances (column 2, lines 55-58). Although the Official Action on page 5 acknowledges the above statement in the Ruffner reference, the Official Action nevertheless attempts to submit a rationale as to why it would be obvious to combine Ruffner and Schulte within the meaning of

35 U.S.C. §103. But Ruffner's affirmatively statement that GPS would not be satisfactory for his multi-functional mobile appliance and further, his mentioning a number of functions thereof, including agricultural functions, while not suggesting the concept of a fence which is automatically movable, includes at least two vehicles which are connected by at least one section, are clearly inconsistent with a determination that a combination of Ruffner and Schulte would lead to Applicant's invention.

In addition, it should be pointed out that concerning the rejection of Claim 85 (see Claim 104), the Schulte post 20 is always maintained at an angle of 90° to the direction of the section. Even very broadly, Schulte does not teach an "angle measuring means." Instead it "maintains" the angle between post 20 and section 6 at 90°. Thus this component in Claim 85 and, a fortiori in new Claim 104, is not taught by Schulte or Ruffner. Moreover, the Official Action does not provide any substantive evidence for a motivation to combine prior art references to produce the invention as claimed herein. As has been often said and is well known to all practitioners in the patent field, virtually all inventions are combinations of old elements. Accordingly, the circumstance that a Patent Examiner finds every component (which is not the case here) of a claimed invention in the prior art, is insufficient to negate patentability; otherwise very few patents would ever issue. Also as has been repeatedly pointed out in decisions of the U.S. Court of Appeals for the Federal Circuit, rejecting patent applications solely by finding prior art corollaries of the claimed elements would permit an Examiner to use the claimed invention itself as a blueprint for piecing together elements of the prior art to defeat patentability of the claimed invention. It is to counter this potential weakness in the obviousness construct, that the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the Legal Test of Obviousness. Moreover, the entire reference must be considered, which here, for the Ruffner reference in particular, has not been done. A rejection

cannot be predicated on the mere identification of individual components of claimed inventions. To warrant a finding that a combination of references teach an invention there must be substantial evidence to that effect. Yet further, in reviewing the record for substantial evidence, it is necessary to take into account evidence that detracts from what the reference might otherwise be considered to teach.

Concerning Claims 92 (see Claim 111), 100 and 103, which add an element of a solar panel, whereas it is true that it is known to add solar panels to vehicles for charging batteries which energize the vehicle and, indeed, in Australia annual races are conducted by vehicles energized solely by solar panels, the concept of utilizing a solar panel or panels on unmanned vehicles controlled by GPS which are used for field demarcation is not shown in the references of record.

It will be noted that independent Claim 101 also includes, *inter alia*, a requirement that each of a plurality of vehicles have location determining means via a GPS which cooperates with a computer for determining the position of each of the vehicles relative to a field which is being demarcated. Again this is not taught by either Ruffner or Schulte and there is no affirmative substantive teaching which would lead to the combination of the two references.

With regard to Claim 102, it is submitted that Schulte does not teach placing the center of gravity of the vehicle below the axis of rotation for the caterpillar treads. It is not entirely clear that Ruffner teaches this advantage as indicated by Figure 7 thereof and, in any event, it is highly doubtful that one skilled in the art would consider modifying the Schulte vehicle so that the axis of rotation of the ground engaging wheels were higher than the center of gravity of the vehicle.

As with the various rationalizations for making the alleged combination of elements in paragraph 2 of the Official Action, it is submitted that the various rationalizations under

paragraph 3 are similarly flawed and, in fact, amount to hypotheses and conjectures of the Examiner without substantive support in the prior art of record.

Further consideration and reexamination of this Application, in its amended form, is requested in view of 35 U.S.C. §132 and regulations in implementation thereof. It is submitted the Application as amended herein is free from ambiguity and avoids the references of record. It is further submitted that the Examiner should have no difficulty in determining that the differences between the subject matter sought to be patented in this Application and prior art and usage within his expert knowledge are such that the subject matter as a whole would not have been obvious at the time the invention was made to persons having ordinary skill in the art to which the subject matter of this Application pertains. In view of the foregoing, an allowance of claims as now presented is earnestly solicited.

Respectfully submitted,

MASON, MASON & ALBRIGHT

By   
Penrose Lucas Albright  
Registration No. 19,082

2306 South Eads Street  
P.O. Box 2246  
Arlington, VA 22202  
Tel (703) 979-3242  
Fax (703) 979-2526

Filed: October 8, 2004